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09/478,307	01/06/2000	ANTHONY JOSEPH NADALIN	AUS990800US1	1518

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EXAMINER

AKPATI, ODAICHE T

ART UNIT

PAPER NUMBER

2135

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/478,307

Applicant(s)

NADALIN ET AL.

Examiner

Tracey Akpati

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 4/29/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,10-20,22-33,35,36 and 38-49 is/are rejected.
- 7) ☒ Claim(s) 3,9,21,34,37 and 50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-50 are pending. Claims 1, 19, 35 have been amended to overcome the 112 rejection. The 112 rejection has been overcome. This action is final.

***Response to Arguments***

1. Applicant's arguments, filed 4/29/04, with respect to Claims 3, 9, 21, 34, 37 and 50 have been fully considered and are persuasive. The 103 rejection pertaining to these claims has been withdrawn. The attorney is advised to add claims 2 and 3 to independent Claim 1 limitation, add claims 7 and 9 to independent Claim 4 limitation, add claims 20 and 21 to independent Claim 19 limitation, add claims 32 and 34 to independent claim 22 limitation, add claims 36 and 37 to independent claim 35 limitation, add claims 48 and 50 to independent claim 38 limitation. These changes will put the claims in a possible condition of allowance.

***Allowable Subject Matter***

Claims 3, 9, 21, 34, 37 and 50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

Claim 1 recites the limitation "associatively storing an identifier for each of said attributes" in lines 10-11 on page 25. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-8, 10-20, 22-33, 35, 36, 38-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katin et al (5261098) in view of RSA Laboratories (PKCS#9 v2.0).

With respect to Claim 1, the limitation "associatively storing an identifier for each of said attributes" is met by Katin on column 6, lines 67-68 and on column 7, lines 1-2.

Further limitation of "registering attributes..." is inherently met by Katin on column 1, lines 24-37. In this referenced section, it is inherent in the object-oriented programming method that the object be registered with a class or an object type family. This is also discussed briefly on column 9, lines 1-7 of Katin.

Katin however does not disclose registering these attributes with a PKCS9 gateway class. This is however disclosed by RSA Laboratories as shown below.

The limitation “registering attributes with a PKCS9 gateway class, wherein the attributes include user-defined attributes and PKCS-standard (Public Key Cryptography Standards) defined attributes” is met by RSA on page 5, section 4.1.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of RSA within the teachings of Katin et al because the method steps described are unique to a system that would want to register and store an identifier for the purpose of utilizing object oriented methods in efficiently storing and classifying data. Katin et al claims on column 2, lines 5-10 that these object-oriented methods “improve interoperability between applications...” since “it is often desirable for the applications to be able to invoke each other and /or share objects.” This would prove useful in implementing these object-oriented methods within a PKCS9 gateway class because this class ‘defines a set of attributes that can be used in other PKCS standards’. Hence achieving optimal interoperability is the goal of the PKCS9 gateway class.

Hence, it would have been obvious to combine the RSA teaching within the system of Katin et al to achieve the claimed invention.

With respect to Claim 2, the limitation “calling a first object-oriented method in the PKCS9 gateway class, wherein the first object-oriented method receives a parameter comprising an object identifier for an attribute” is met by Katin et al on column 9, lines 36-38.

With respect to Claim 4, the limitation “invoking a first object-oriented method to process an attribute object, wherein the first object-oriented method is defined in an abstract

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class for attribute objects with a subclass for undefined attributes and a subclass for defined attributes, wherein the subclass for defined attributes is further comprised of a subclass for each PKCS-defined (Public Key Cryptography Standards) attribute and a subclass for each user-defined attribute” is met by Katin et al on column 9, lines 1-14 and on column 3, lines 13-20.

Further limitation of “invoking a second object-oriented method to process an attribute object, wherein the second object-oriented method is defined in a PKCS9 gateway class” is met by Katin et al on column 9, lines 36-38.

The limitation “in response to invoking the first object-oriented method or the second object-oriented method, processing the result returned by the first object-oriented method or the second object-oriented method” is met on by Katin et al on column 9, lines 51-56.

Katin however does not meet the limitation of a PKCS defined attributes. This is however disclosed by RSA on page 8, section 5.2.2, last two paragraphs.

The reason for obviousness has already been disclosed in Claim 1.

With respect to Claim 5, all the limitation is met by Katin et al except the limitation disclosed below.

The limitation “where a PKCS compatible attribute is a unique object identifier and value, as defined by the Abstract Syntax Notation (ASN.1) for the X.500 Attribute type” is met by RSA on pages 5 and 6, sections 4.1 and 4.2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of RSA within the system of Katin et al because the coupling

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of a unique object identifier with some value is a very necessary step when it comes to object-oriented methods of initializing an object.

With respect to Claim 6, all the limitations is met by Katin et al except that disclosed below.

The limitation “wherein each defined attribute is implemented as a separate class” is met by RSA on page 6, section 4.2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of RSA within the system of Katin et al because the implementation of a different class for each defined attribute allows the attribute object identifier to be mapped to an implementing class when instantiated.

With respect to Claim 7, all the limitation is met by Katin et al except that disclosed below.

The limitation “wherein each defined attribute is registered with the PKCS9 gateway class” is met by RSA on page 8, section 5.2.2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of RSA within the system of Katin et al because PKCS9 gateway class is a class that defines a set of attributes that can be used in other PKCS standards. Hence achieving optimal interoperability is necessary for the PKCS9 gateway class and an highly efficient way of doing so is by implementing object-oriented methods.

With respect to Claim 8, its limitation is similar to Claim 7 limitation and hence its rejection can be found therein.

With respect to Claim 10, the limitation “wherein the second object-oriented method determines a type of the attribute object by performing an instance of comparison to registered attributes” is met by Katin et al on column 9, lines 1-17.

With respect to Claim 11, all the limitation is met by Katin et al except the limitation disclosed below.

The limitation “wherein the attribute object is constructed using a constructor method in a class associated with a PKCS-compatible attribute” is met by RSA on page 4, section 3, second paragraph.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of RSA within the system of Katin et al because these are the basic steps when defining and initializing an object belonging to a class.

With respect to Claim 12, all the limitation is met by Katin et al except the limitation disclosed below.

The limitation “wherein in response to determining an object identifier and a value associated with the object identifier and determining the object identifier is registered with the PKCS9 gateway class, the PKCS9 gateway class returns an instance of a registered attribute” is met by RSA on page 7, section 5.2.1.



It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of RSA within the system of Katin et al because these are the basic steps when defining and initializing an object belonging to a class.

With respect to Claim 13, the limitation “wherein in response to determining a DER-encoded byte stream with an object identifier, the second object-oriented method in the PKCS9 gateway class returns an instance of a PKCS-compatible attribute” is met by Katin on column 9, lines 44-56.

With respect to Claim 14, the limitation “in response to determining the object identifier from the DER-encoded byte stream is not registered with the PKCS9 gateway class, an instance of an undefined attribute is returned with the value being a DER-encoded byte stream” is met by Katin et al on column 9, lines 38-43.

With respect to Claim 15, the limitation “, in response to determining the object identifier from the DER-encoded byte stream is registered with the PKCS9 gateway class, an instance of an attribute with the object identifier is returned” is met by Katin et al on column 9, lines 38-43.

With respect to Claim 16, all the limitation is met by Katin et al except the limitation disclosed below.

The limitation “wherein a registered attribute object is encoded to a DER-encoded byte stream by using the first object-oriented method for encoding the attribute object” is met by RSA on page 28, section B.3.1.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of RSA within the system of Katin et al because these are the basic steps when defining and initializing an object belonging to a class.

With respect to Claim 17, all the limitation is met by Katin et al except the limitation disclosed below.

The limitation “wherein a registered attribute object represented as a DER-encoded byte stream is decoded to an attribute object by using the second object-oriented method for decoding the attribute object” is the reverse of Claim 16 limitation and hence its rejection is contained in Claim 16 rejection.

With respect to Claim 18, all the limitation is met by Katin et al except the limitation disclosed below.

The limitation “wherein a second object-oriented method in the PKCS9 gateway class extracts attribute values into forms, wherein the forms are strings, numbers, and/or other non-abstract data types” is met by RSA on page 29, section B.3.3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of RSA within the system of Katin et al because extracting the value entered by the user/system into a string or etc. is a basic step in initializing an object.

With respect to Claim 19, its limitation is similar to Claim 1 and hence its rejection is contained in Claim 1 rejection.

With respect to Claim 20, its limitation is similar to Claim 2 and hence its rejection is contained in Claim 2 rejection.

With respect to Claim 22, the limitation “first constructing means for constructing a new instance of an attribute object” is met by Katin on column 2, lines 37-54.

Further limitation of “first differentiating means for differentiating between attribute objects of different types” is met by Katin on column 2, lines 55-61.

Futher limitation of “first extracting means for extracting values associated with an attribute object” is met by Katin on column 3, lines 4-12.

Further limitation of “extending means for extending a set of attributes with user-defined types” is met by Katin on column 3, lines 13-17.

Katin et al however does not disclose registering an attribute in PKCS9 gateway class nor does he discuss DER-encoding. This is met by RSA.

The limitation “converting means for converting an instance of an attribute object to and/or from DER-encoding” is met by RSA on page 28, section B.3.1.

Further limitation of “first registering means for registering an attribute class with a PKCS9 gateway class” is met by RSA on page 5, section 4.1.

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It would have been obvious to combine the teachings of RSA within the system of Katin et al because registering an attribute in PKCS9 gateway class improves interoperability of the applications involved as explained in Claim 1 rejection.

With respect to Claim 23 and 39, its limitation is similar to Claim 5 and hence its rejection is contained in Claim 5 rejection.

With respect to Claim 24 the limitation is similar to the first paragraph of Claim 4 and hence its rejection is can be found within Claim 4, first paragraph rejection.

With respect to Claim 25, the limitation “second constructing means for constructing wherein a new instance of an attribute object using a class constructor” is met by Katin et al on column 9, lines 44-56.

With respect to Claim 26, the limitation “third constructing means for constructing a new instance of a PKCS-compatible attribute object is constructed using the PKCS9 gateway class if an attribute object identifier and a class implementing that attribute are registered” is met by Katin et al on column 10, lines 3-10.

With respect to Claim 27, all the limitation is met by Katin et al except the limitation disclosed below.

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The limitation “fourth constructing means for constructing a new instance of a PKCS-compatible attribute object using the PKCS9 gateway class based on a DER-encoded byte stream” is met by RSA on page 28, sections B.3.1 and on B.3.3.

It would have been obvious to one of ordinary skill in the art because DER encoding is a useful means of encoding an ASN.1 value as an octet string. Hence since this works hand in hand with ASN.1, which is an OSI method of specifying abstract objects, this would be a useful way to encode the byte stream.

With respect to Claim 28, the limitation “second differentiating means for differentiating a type for an attribute object determined by performing an instance of comparison to registered attribute classes” is met by Katin et al on column 9, lines 1-17.

With respect to Claim 29, all the limitation is met by Katin et al except the limitation described below.

The limitation “encoding means for encoding an attribute object to a DER-encoded object by using an encode method of the attribute object” is met by RSA on page 28, section B.3.1.

It would have been obvious to one of ordinary skill in the art because DER encoding is a useful means of encoding an ASN.1 value as an octet string. Hence since this works hand in hand with ASN.1, which is an OSI method of specifying abstract objects, this would be a useful way to encode the byte stream.

With respect to Claim 30, the limitation “decoding means for decoding an attribute object represented as a DER-encoded string to an attribute object by using a decode method of the attribute object” is the reverse of Claim 29 and hence Claim 29 rejection stands.

With respect to Claim 31, all the limitation is met by Katin et al except the limitation disclosed below.

The limitation “second extracting means for extracting the PKCS9 gateway class returns attribute values, wherein the values are represented as strings, numbers, and/or other non-abstract data types” is met by RSA on page 29, section 3.3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of RSA within the system of Katin et al because extracting the value entered by the user/system into a string or etc. is a basic and necessary step in initializing an object.

With respect to Claim 32 and 33, all the limitation is met by Katin et al except the limitation disclosed below.

The limitation “second/third registering means for registering a PKCS-compatible attribute is registered with the PKCS9 gateway class” is met by RSA on page 5, section 4.1.

It would have been obvious to combine the teachings of RSA within the system of Katin et al because registering an attribute in PKCS9 gateway class improves interoperability of the applications involved as explained in Claim 1 rejection.

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With respect to Claim 35, its limitation is similar to Claim 1 limitation and hence its rejection can be found therein.

With respect to Claim 36, its limitation is similar to Claim 2 limitation and hence its rejection can be found therein.

With respect to Claim 38, its limitation is similar to Claim 22 limitation and hence its rejection can be found therein.

With respect to Claim 39, its limitation is similar to Claim 23 limitation and hence its rejection can be found therein.

With respect to Claim 40, its limitation is similar to Claim 24 limitation and hence its rejection can be found therein.

With respect to Claim 41, its limitation is similar to Claim 25 limitation and hence its rejection can be found therein.

With respect to Claim 42, its limitation is similar to Claim 26 limitation and hence its rejection can be found therein.

With respect to Claim 43, its limitation is similar to Claim 27 limitation and hence its rejection can be found therein.

With respect to Claim 44, its limitation is similar to Claim 28 limitation and hence its rejection can be found therein.

With respect to Claim 45, its limitation is similar to Claim 29 limitation and hence its rejection can be found therein.

With respect to Claim 46, its limitation is similar to Claim 30 limitation and hence its rejection can be found therein.

With respect to Claim 47, its limitation is similar to Claim 31 limitation and hence its rejection can be found therein.

With respect to Claim 48, its limitation is similar to Claim 32 limitation and hence its rejection can be found therein.

With respect to Claim 49, its limitation is similar to Claim 33 limitation and hence its rejection can be found therein.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.




Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracey Akpati whose telephone number is 703-305-7820. The examiner can normally be reached on 8.30am-6.00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 703-305-4393. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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